

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Offic**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/903,486	07/29/97	FORBES	L 303-326US1

MM42/0118  
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EXAMINER

MINTEL, W

ART UNIT	PAPER NUMBER
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2811

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**DATE MAILED:** 01/18/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

## Office Action Summary

Application No.	Applicant(s)
08903486	Forbes et al,
Examiner	Group Art Unit
William Mintel	2811

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

### Status

- Responsive to communication(s) filed on \_\_\_\_\_.
- This action is FINAL.
- Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

- Claim(s) 1-15 + 22-36 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- Claim(s) \_\_\_\_\_ is/are allowed.
- Claim(s) \_\_\_\_\_ is/are rejected.
- Claim(s) 1-15 + 22-36 is/are objected to.
- Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

### Application Papers

- See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.
- The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- The specification is objected to by the Examiner.
- The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119 (a)-(d)

- Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - All  Some\*  None of the CERTIFIED copies of the priority documents have been received.
  - received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
  - received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

### Attachment(s)

- Information Disclosure Statement(s), PTO-1449, Paper No(s). 11+13  Interview Summary, PTO-413
- Notice of Reference(s) Cited, PTO-892  Notice of Informal Patent Application, PTO-152
- Notice of Draftsperson's Patent Drawing Review, PTO-948  Other \_\_\_\_\_

## Office Action Summary

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-11, 14, 15, 22-26, 29-32, 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oyama (367) in view of the Admitted Prior art.

3. In re claim 1, lines 1-2, and 4, the English abstract of Oyama recites a MOSFET with source/drains 6, and SiC gate 41. Fig. 1 of Oyama shows a conventional Si substrate 1 and lacks the underlying insulating portion of claim 1, line 3. However, applicant at pages 1-3 of the specification teaches SOI structures. Therefore, in re claim 1, because of the admitted prior art it would have been obvious to form the MOSFET of Oyama on an insulating substrate to obtain the well known advantages of SOI technology.

4. In re claims 4, 5, 11, 14, applicant's specification teaches CMOS structures. In re claims 15, 22, 24, 25, 26, 29, 31, 32, 35, it is well known in the art to use CMOS devices to make memory cells. In re claims Oyama recites SiC in the abstract, which is at least a disclosure concerning stoichiometric SiC.

5. Claims 2, 3, 12, 13, 27, 28, 33, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oyama (367) in view of the Admitted Prior Art as applied to claim above, and further in view of Halvis and Chen.

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6. Oyama is described above but does not disclose poly or microcrystalline SiC in the English abstract. Chen (766) at column 4, lines 5-20, teaches nanocrystalline SiC, and Halvis at lines 1-4 of the abstract teaches polycrystalline SiC. These references teach that various forms of SiC exist such as poly-, nano-, micro-, amorphous, etc. It would therefore have been obvious to use such materials as the SiC gate of Oyama as known art equivalent forms of SiC.

7. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the underlying insulating portion must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

8. Applicant's arguments with respect to claims 1-15, 22-36 have been considered but are moot in view of the new ground(s) of rejection.

9. Cited as of background interest is Forbes (368). Cited as of background interest for SiC is Hartsell.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to W. Mintel whose telephone number is (703) 308-4916. The examiner can normally be reached on Monday-THURSDAY from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas, can be reached on (703) 308-2772. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Mintel/ds

01/08/00

William Mintel  
William Mintel  
Primary Examiner  
2811